



Wood River Valley Modeling Technical Advisory Committee Modeling Objectives

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Modeling Objectives

- Aquifer models built for a variety of reasons
 - Water quality/contaminant transport
 - Water temperature
 - Groundwater flow (delineation of wellhead protection areas, eval. of management alternatives, hydrologic impact assessments, etc.)
- Need to consider scale when designing model, evaluating model predictions, and assigning model input
- Definition of objectives necessary to build the right tool for the job



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Wrong tool for the job



Why a groundwater flow model?

- Big Wood River upstream from Magic Reservoir fully appropriated (1980)
- Groundwater and surface water are hydraulically connected (1991)
- Need to be able to evaluate gw/sw interaction
- GW flow model is tool of choice for planning, water resource management, and conjunctive administration

Additional Requirements

- Accessible to public
- Transparency in development
- Defensible and well documented
- Other

Draft Design Objectives

1. Represent current understanding of aquifer system and gw/sw interaction
2. Up-to-date, accurate water budget (recharge and discharge)
3. Investigate gw/sw dynamics on valley-wide scale
4. Evaluate WRV aquifer management options

Draft Design Objectives

5. Serve as tool for aquifer planning
6. Serve as tool for conjunctive administration
 - Aquifer curtailment analyses
 - Mitigation requirements
 - Groundwater right transfers
7. Improve understanding of aquifer system and guide future investigations

Draft Design Objectives

8. Defensible in litigation

- Scientifically accepted modeling platform
- USGS highly regarded for modeling expertise
- MTAC allows technical concerns to be aired and addressed during model development

9. Accessible and well documented

- Model and code are public domain
- Data available via the Internet
- Peer-reviewed USGS scientific report

Discussion